

# ABSTRACT

~~Disclosed is a method A~~ for embedding a digital watermark on a wavelet lowest subband. ~~The method including~~ includes: setting a DC component region of a multi-stage wavelet-transformed original copy image to a watermark embedment region, and high-frequency filtering an original picture  $LL_n$  of the embedment region; generating index information for designating a pixel position, and a watermark sequence to be embedded; calculating an embedment strength  $\lambda$  for each position of the watermark embedment region; in case the watermark sequence is sequentially embedded on an embedded position designated by the index information, mutually comparing the original picture  $LL_n$  coefficient value for each embedded position with a mirror picture  $LL_n'$  coefficient value, and then altering the original picture  $LL_n$  coefficient value; and in case the original picture  $LL_n$  coefficient value is differentiated above a predetermined value with reference to the corresponding embedment strength  $\lambda$ , skipping the watermark embedment for the position.